NOTES ON SOME RARE PLANTS COLLECTED FROM NEFA

ARALIACEAE

Helwingia himalaica Hk. f. & Thom. ex Clarke var. **lanceolata** (Watt ex Kanjilal *et al.*) Deb in Bull. bot. Surv. India 3:273, 1961. *Helwingia lanceolata* Watt ex Kanjilal *et al.* Fl. Assam 2:373, 1938, nom nud. (Fig. 1).

George Watt collected from Manipur (Sirohee furar, alt. c 2400 m) a specimen of *Helwingia* (G. *Watt* 6465) during June 1882 and named it *Helwingia lanceolata.* This manuscript name was later recorded by Kanjilal *et al.* (l.c.); Dr. D. B. Deb reduced it to a variety and provided a latin diagnosis to validate it.

From the specimens at the Central National Herbarium, Calcutta, it is evident that this plant has not been collected from India since 1882. The present report is from Ziro to Tamen (alt. c 1500 m) Subansiri F.D., NEFA (*Subba Rao* 25103) which is north of Manipur.

Thus this is the first record of a rare plant after a lapse of more than 80 years.

Small glabrous shrub. Leaves alternate, linear, lanceolate, long acuminate, cuneate at base, serrate, membraneous; lateral nerves arched uniting at the margin; petioles slender, 4-7 mm long; lamina 3-10×4-1.5 cm. Flowers not seen. Fruits sessile, epiphyllous, solitary, tricarpellate with furrows between the carpels.

COMPOSITAE

Senecio mortoni C. B. Clarke, Comp. Ind. 208, 1876; Hook. f. Fl. Brit. Ind. 3:349, 1882. This plant of the Sikkim Himalayas was named by Clarke after Roxburgh's grandson, who was Deputy Commissioner of Sikkim in 1870. According to Clarke this plant is distributed in Nepal, Sikkim and Bhutan. Hook. f. listed himself and Clarke as collectors, and gave the distribution as E. Nepal, Sikkim and W. Bhutan. (Fig. 2).

All the sheets of this species in the Central National Herbarium were examined by the authors and were found all except one (*Gould, B.J.* 1036) to be from Sikkim Himalayas. The authors did not come across any collection from E. Nepal or earlier Bhutan collections (Gould's collection is in 1938) nor could they locate Clarke's specimen. A specimen from Sikkim (Phalut, no. 77) not bearing the collector's name etc. was found to be identified and named by Clarke in his own handwriting. But this appears to have been collected by some one other than Clarke (Dr. S. K. Mukerjee in a letter to the senior author). Clarke did not designate any type but mentions, 'Hab. in Sikkim at 9,000—12,000 ped. alt—'. A specimen at the Central National Herbarium, Calcutta (Acc. no. 247380) collected from Sikkim by J. D. Hooker indicates the altitude as 9,000—12,000 ft but number and date of collection are lacking. It is evident that Clarke had this sheet before him while describing this species in his *Compositae Indicae.* We, therefore, designate the collection of J. D. Hooker referred to above as the lectotype.

The present report is from Ziro (c 1500 m) in Subansiri F.D., NEFA (*Subba Rao* 24708) which is east of Sikkim separated by Bhutan and Kameng F.D. While there is no report of this plant from Kameng F.D. so far, there is one collection from Bhutan (Choidi ponkey to Seka-La, *Gould, B. J.* 1036, 13-7-1938) as earlier stated.

An erect shrub, 100-130 cm high, upper parts pubescent. Leaves petiolate, palmate, 5-11 fid, segments serrate, incissions rather acute, nearly glabrous, petiole of the cauline leaves with a basal amplexicaule sheath and that of the radical leaves 15-20 cm long, not winged. Heads numerous, large, corymbose, each 5-6 flowered. Involucral bracts 2 seriate, 5 in each, outer very short, narrower, inner longer and broader, linear, oblong, rarely acute, membraneous, glabrous or puberlo-pubescent, free to the base. Corolla campanulate, partly tubular; tube narrow and almost equal to the campanulate limb. Achenes narrow, oblong, shorter than the reddish yellow pappus.

Specimens examined at the Central National Herbarium:-

Sikkim: Phalut, 77, Coll. & Date? (Acc. no. 247378); Phaloot, 6-10-1857, Coll. & no.? (Acc. no. 247379); *Hooker, J. D.* (9,000-12,000 ft), loc. & no.? (Acc. no., 247380); Bijan (12,000 ft), *Dr. King's collector,* no.? June 1888 (Acc. no. 247384); Lachung, *Gammie, G. A.*, no.?, Aug. 1892 (Acc. no. 247383); Chola Range, Dalam Chai, (8000 ft), *Gammie, G. A.*, 1279, 23-9-1892; *Cave, G. H.*, 246, loc.?, 8-12-1903; Goma Thang, *Ribu* 193, Oct. 1908; Changu (12,300 ft), *Chatterjee, D.*, 207, 13-7-1956; Phalut, *Kurz, S.*, no. & date? (Acc. no. 247385, 247386); loc., Coll., no. & date? (Acc. no. 247381).

VACCINIACEAE

Vaccinium nuttalii (Clarke) Sleumer in Bot. Jahrb. 71:477, 1941. *Vaccinium serratum* Wight var. *muttalii* Clarke in Hook. f. Fl. Brit. Ind. 3:452, 1882. (Fig. 3).

Nuttal collected this plant from Bhutan, and Clarke mentioned it as a variety of *Vaccinium serratum* Wight, naming the variety after the collector.

It differs strikingly from *Vaccinium serratum* Wight in having leaves up to 22 cm long and about 7 cm broad. It was raised to specific rank by Sleumer (1941).

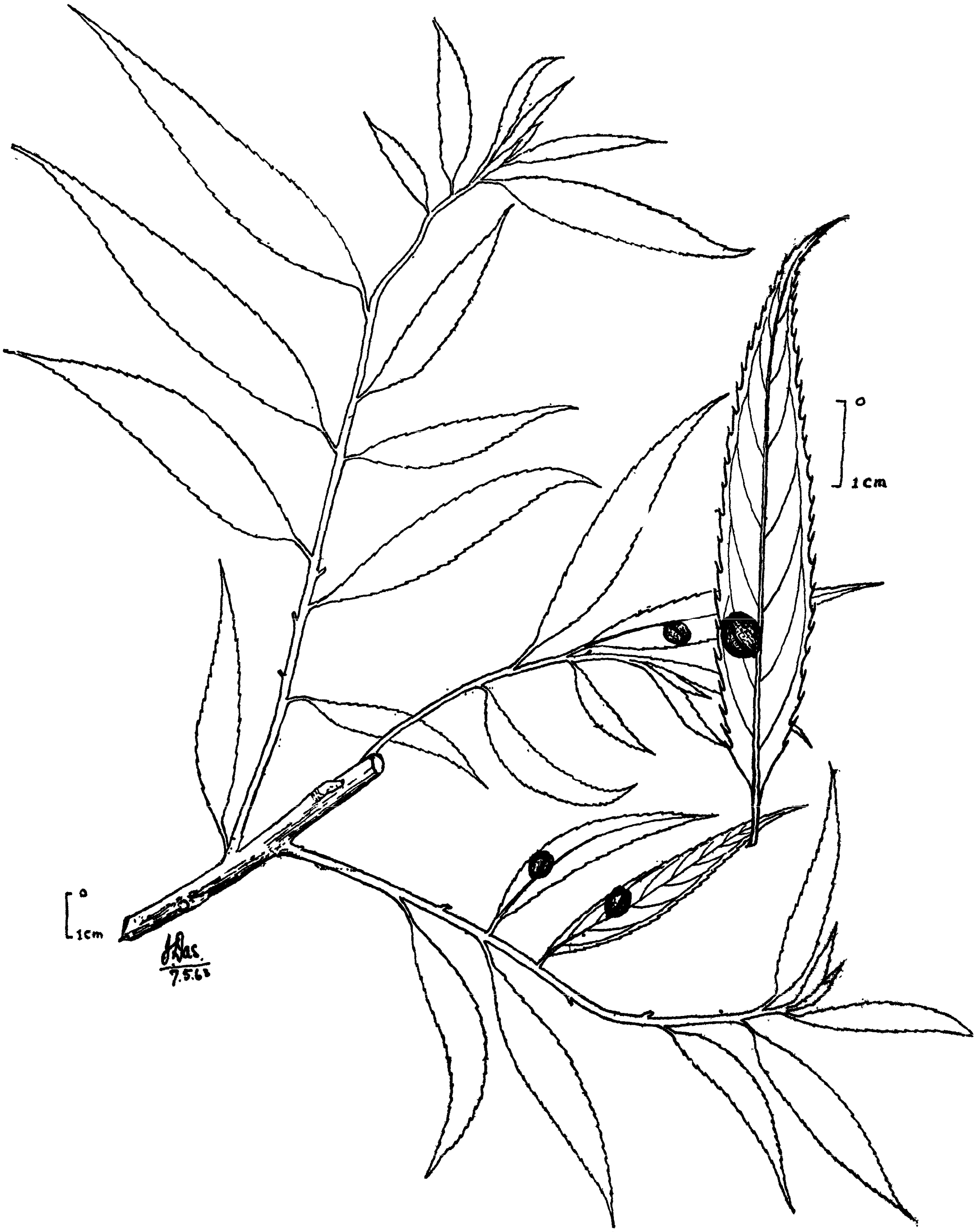

Fig. 1. *Helwingia himalaica* Hk. f. & T. ex C.B. Clarke var. *lanceolata* (Watt ex Kanjilal *et al.*) Deb
Left : Part of the plant. *Right.*: Enlarged leaf showing epiphyllous fruit.

It is not represented in the collections of the Central National Herbarium, Calcutta. According to Sleumer (l.c.) two specimens are available in the Kew Herbarium. The specimen collected in NEFA

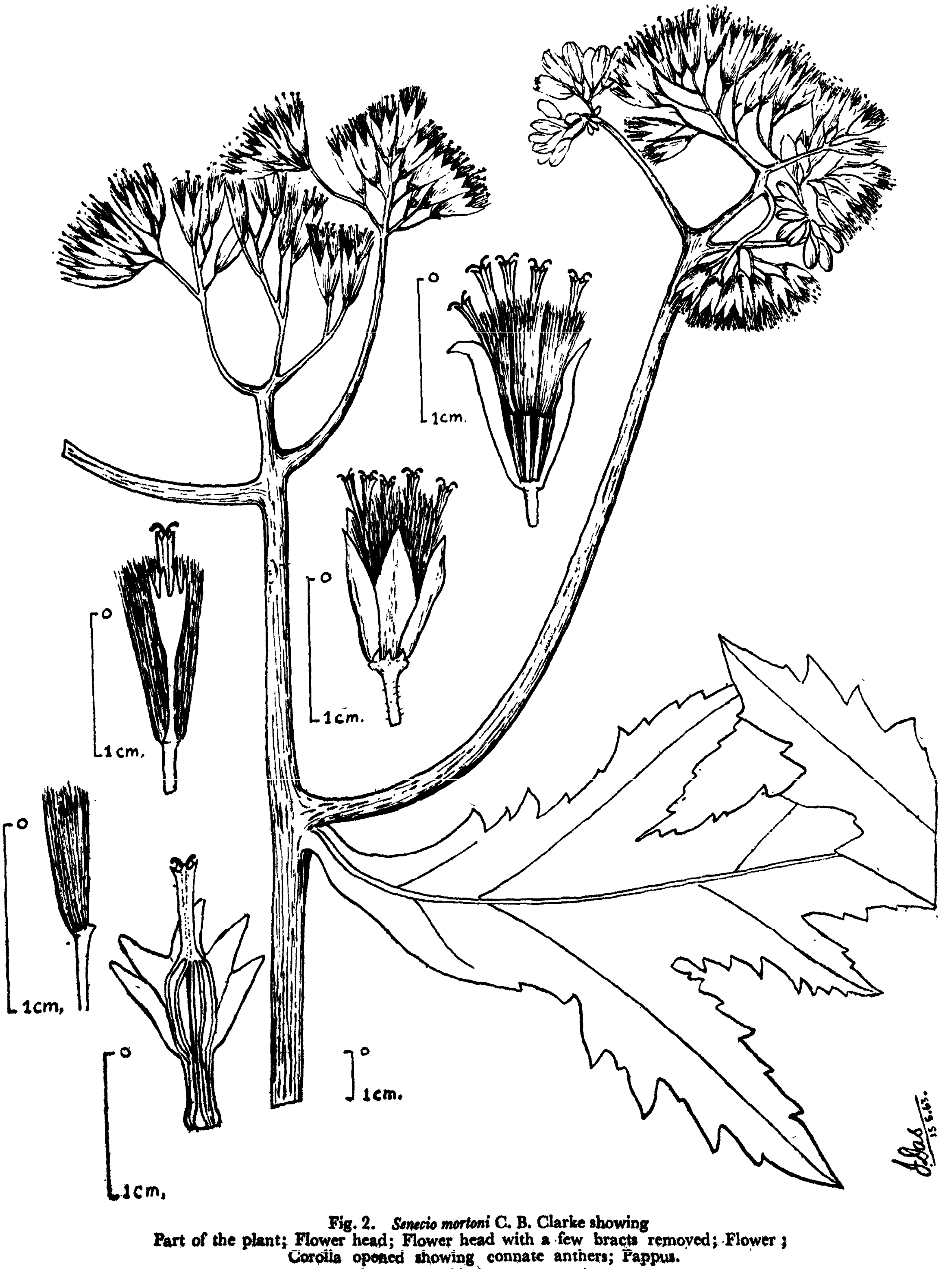

Fig. 2. *Senecio mortoni* C. B. Clarke showing
Part of the plant; Flower head; Flower head with a few bracts removed; Flower; Corolla opened showing connate anthers; Pappus.

was identified as *V. nuttalii* (Clarke) Sleumer at Kew.

The date of Nuttal's collection is not known, but it is before 1882, the year of publication of Clarke's work. There has not been any report of any collection of this plant during the last 82 years from any place. The present report is from Begi to Amji, Subansiri F.D., NEFA (*Subba Rao* 24818)

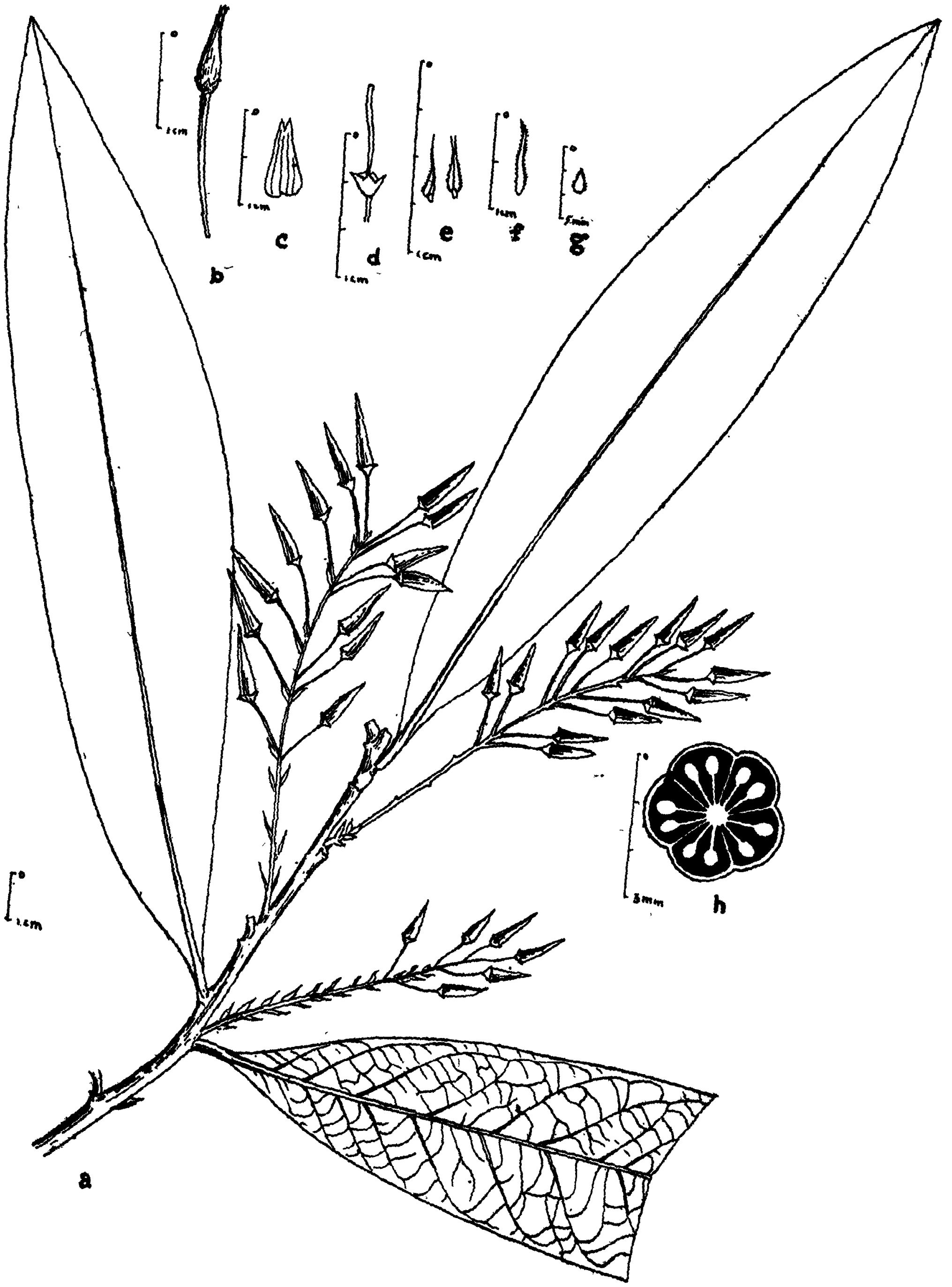

Fig. 3. *Vaccinium nuttalii* (Clarke) Sleumer
a. Part of the plant. b. Flower. c. Corolla. d. Calyx and gynoecium. e. Stamen (side and front views). f. Bract. g. Bracteole. h. Cross section of ovary.

and the specimen was collected during June, 1961.

Thus this is also the first record of this plant after the type collection and the first record for India.

Small tree. Leaves simple, alternate, lanceolate, coriaceous, petiole 6-12 mm, lamina 13-22 cm × 3.5-6.5 cm, margin recurved, entire, acute, base cuneate, midrib raised and prominent on both sides, veins impressed above. Inflorescence axillary, racemose, up to 10 cm long, rachis pubescent. Flowers pentamerous, actinomorphic, bract 1, ciliate, bracteoles 2, ciliate, pedicels filiform, 5-15 mm, pubescent. Calyx 5 lobed, lobes deltoid. Corolla thin, of one layer showing a membraneous wing at the sinuses, 5 lobed, lobes short, reflexed in mature flowers. Stamens 10, in one whorl, free, epigynous, filaments thin and broad, anthers two, adnate, oblong, ecalcarate, covered with glandular pubescence, produced upwards into two tubules, opening by slits which are ⅓ the length of the tubules. Ovary inferior, five locular, ovules many on axile placentas, style cylindric, stigma simple. Fruit not seen.

ACKNOWLEDGEMENTS

We are grateful to the Director, Royal Botanic Gardens, Kew, for kindly identifying *Vaccinium nuttalii* (Clarke) Sleumer; to Dr. H. Sleumer, Rijksherbarium, Leiden, Holland, for kindly supplying a typed copy of the extract from his paper pertaining to *Vaccinium nuttalii* (Clarke) Sleumer and to Dr. S. K. Mukerjee, Keeper, Central National Herbarium, Calcutta for his help in the selection of the lectotype of *Senecio mortoni* Clarke.

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THREE NEW COMBINATIONS IN AIZOACEAE

Trianthema govindia Buch.-Ham. ex G. Don, Gen. Syst. 3: 72, 1834 was considered by several authors to be identical with *T. pentandra* Linn. and treated as such in Indian Floras. It has since been established by Meliville (Kew Bull. 1952: 264, 1952) that the pentandrous Indian species is quite distinct from *T. pentandra* Linn. which is chiefly African in distribution.

Jeffrey [Kew Bull. 14 (2): 237, 1960] has shown that all the species generally described under *Trianthema* Linn. are not congeneric. He proposed the transfer of the digynous plants to another genus *Zaleya* Burm. f. The two genera can be distinguished as follows:

Operculum of capsule 2-valved, the valves usually separating; ovules 4, attached at one side to the interlocular septum; ovary 2-locular; stigmata 2 .... *Zaleya.*

Operculum of capsule 1-valved, capsule pyxidiate, ovary unilocular; style 1 .... *Trianthema.*

Accordingly, *Trianthema govindia* (Buch.-Ham. ex G. Don) should be transferred to *Zaleya* and the following new contributions become necessary.

Zaleya govindia (Buch.-Ham. ex G. Don) N. C. Nair, comb. nov. *Trianthema govindia* Buch.-Ham. ex G. Don, Gen. Syst. 3: 72, 1834; Meliville in Kew Bull. 1952: 264, 1952. *T. pentandra* auct. plur. non. Linn.

Z. govindia var. **flava** (Blatt. et Hallb.) N. C. Nair, comb. nov. *Trianthema pentandra* var. *flava* Blatt. et Hallb. in J. Bombay nat. Hist. Soc. 26: 531. *T decandra* Linn. var. *flava* (Blatt. et Hallb.) Santapau in J. Bombay nat. Hist. Soc. 56: 280, 1959.

Z. govindia var. **rubra** (Blatt. et Hallb.) N. C. Nair, comb. nov. *Trianthema pentandra* var. *rubra* Blatt. et Hallb. in J. Bombay nat. Hist. Soc. 26: 530, 1919. *T. decandra* Linn. var. *rubra* (Blatt. et Hallb.) Santapau in J. Bombay nat. Hist. Soc. 56: 279, 1959.

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